SCX-RD100
COAXIAL REMOTE CONTROLLER

user manual

imagine the possibilities

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SAMSUNG

Safety information

CAUTION

RISK OF ELECTRIC SHOCK.
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.

This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

- To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

WARNING

1. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.

2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.

3. Do not connect multiple controllers to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.

4. Securely plug the power cord into the power receptacle. Insecure connection may cause fire.

5. When installing the controller, fasten it securely and firmly. The fall of controller may cause personal injury.

6. Do not place conductive objects (e.g. screwdrivers, coins, metal parts, etc.) or containers filled with water on top of the controller. Doing so may cause personal injury due to fire, electric shock, or falling objects.

7. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric shock.

8. If any unusual smells or smoke come from the unit, stop using the product. In such case, immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.

9. If this product fails to operate normally, contact the nearest service center. Never disassemble or modify this product in any way. (SAMSUNG is not liable for problems caused by unauthorized modifications or attempted repair.)

10. When cleaning, do not spray water directly onto parts of the product. Doing so may cause fire or electric shock.

CAUTION

1. Do not drop objects on the product or apply strong blows to it. Keep away from a location subject to excessive vibration or magnetic interference.

2. Do not install in a location subject to high temperature (over 50°C), low temperature (below -10°C), or high humidity. Doing so may cause fire or electric shock.

3. If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.

4. Remove the power plug from the outlet when there is a lighting storm. Neglecting to do so may cause fire or damage to the product.

5. Keep out of direct sunlight and heat radiation sources. It may cause fire.

6. Install it in a place with good ventilation.

7. Avoid aiming the controller directly towards extremely bright objects such as sun.

8. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

9. The Mains plug is used as a disconnect device and shall stay readily operable at any time.

Important Safety Instructions

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer.

12. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.

13. Unplug this apparatus when a card is used. Use caution when moving the cart/ apparatus combination to avoid injury from tip-over.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as powersupply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Contents

ENG

Introduction

INTRODUCTION

This product is a remote controller for Samsung's CCTV cameras of New-generation DSP, via coaxial cable not requiring additional control wirings.

❖ Features

- Long-distance remote control

  Through RS-485 communication, remote control is possible up to 1.2 kilometers.

- Easy Control

  Easy and simple 5-way keys for controlling the camera.

- System's Expandability

  It is possible to implement an integrated system by using the system controller (SSC-5000 or similar) through RS-485 communication.

- Portability

  Its small size and light weight maximizes the portability, as well as its power source adopting standard battery for outdoor use.

❖ List of controllable models

- You can control Samsung's cameras supporting coaxial communications.

- Samsung's RS-485 supporting cameras can be controlled through RS-485 communication. (For supported 3rd-party protocols, refer to page 17.)
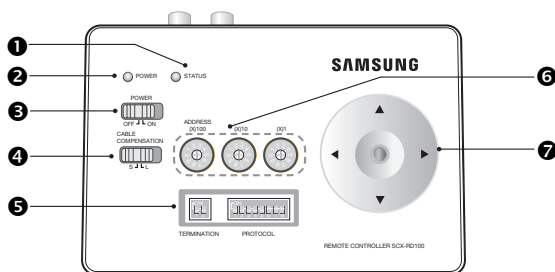
❖ What's Included

<Controller>   <User Guide>

PART NAMES AND FUNCTIONS

❖ **Front Panel**

❶ **STATUS LED**

- Displays the status of the current operation.

❷ **POWER LED**

- When the controller turns on, it will be turn light.

❸ **POWER Switch**

- If you slide it to **ON**, the controller turns on.

❹ **CABLE COMPENSATION Switch**

- For long distance coaxial communications, you can use this switch for amplifying the control signal.
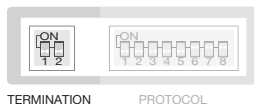
| Cable SPEC	Compensation	
5C-HFBT	S	L
	250M or less	200M ~ 500M

Introduction

❺ RS-485 TERMINATION & PROTOCOL Setting Switch

- You can select to set the RS-485 termination.

- Turn this switch **ON**, if RS-485 termination is required.

TERMINATION   PROTOCOL

- For multi-protocol settings, you can set the protocol and baud rate, and selection of COAXIAL/RS-485 or RS-232.

TERMINATION   **PROTOCOL**
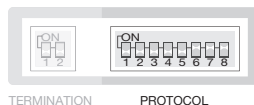
- Use pin 1,2,3,4 of the Protocol setting switch to select a protocol.

- Use pin 5,6 of the Protocol setting switch to select a baud rate.

- Use pin 7 of the Protocol setting switch to select COAXIAL/RS-485 output.

- Use pin 8 of the Protocol setting switch to select RS-232 input.

❻ Address Switch

- For RS-232 / RS-485 communications, you can use this switch to set the address.
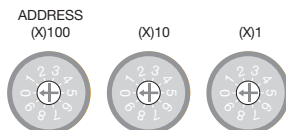
ADDRESS
(X)100   (X)10   (X)1

- Set the address by using three switches shown above.

- From the left, the number is hundreds, tens and ones place, respectively. The effective range of valid address is between 0 and 255 (1~255 for multi-protocol).

✎ ■ If you specify the address as other than between 0 and 255, it will be set to 0.
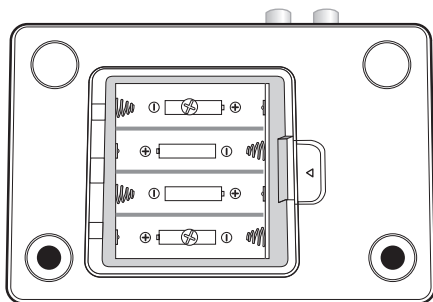NOTE

❼ Menu Navigation Key

Use this to navigate through the menus.

PART NAMES AND FUNCTIONS

❖ **Rear Panel**

- AA BATTERY

  You can use 4 AA-sized batteries for the power.

- The average operation time is 20 hours based on the alkaline battery.
  (If the battery is discharged, it can cause a distortion of the video signal, or electric interference.)


✎
NOTE
- Remove the battery if you do not use the controller for a longer period. Otherwise, it may cause damage to the controller from a leak of the battery solution.

- Take caution not to change the specified polarity.

- Do not use a new battery with an old one.

- For storing used batteries, keep out of reach of children. Wasted batteries are to be collected separately.

Introduction

❖ **Top**
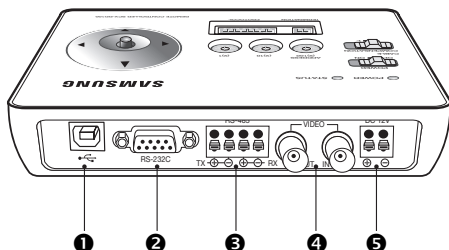
❶ USB Port

- This terminal is used for updating the product's firmware.

❷ RS-232 Port (9-pin D SUB)

- Used to control remotely using RS-232 communication.

❸ RS-485 Port (4-pin)

- Used to control remotely using RS-485 communication.

❹ VIDEO IN/OUT Connector (BNC)

- **VIDEO IN** receives coaxial communication from cameras, and **VIDEO OUT** outputs the video signal.

❺ DC12V Power Connector (2-PIN)

- Used for connecting DC12V power source.

Installation

CHECKING INSTALLATION ENVIRONMENT

- Please check the following instructions before installation for your safety.

- The way of connecting the main product with external devices (COAXIAL BNC) is very important to build up a proper system.

- Do not disassemble the unit; doing so could expose you to dangerous high voltage points.

INSTALLATION PRECAUTIONS

- Make sure you turn off the product before installation.

- Do not put a strong force on or shake the product; otherwise it may cause malfunction.

- Keep the product away from areas of strong magnetic field or electric interference, or wireless devices such as radio or TV set.

- Keep clean the installation place during and after the installation.

- An abnormal smells from the product is a sign of abnormal condition, which may cause fire or electric shock. In this case, disconnect the product from the main power immediately and contact the retailer for technical help from authorized servicing.

- Keep the product away from a wet floor, do not use an unearthed power extension cable, worn-out power cord, neither forget earth-grounding.

- Use a dry cloth only to dirt off the product. If the product is badly dirty, apply neutral detergent on a cloth that is used to dirt off, and wipe it out with a dry cloth.

- Do not use volatile substances such as alcohol, benzene or thinner as these may damage the finish.
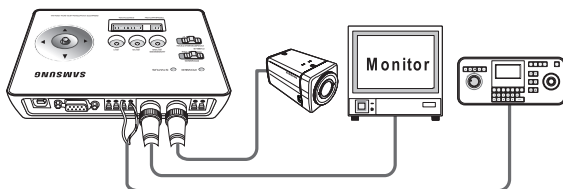
Connection & Control

TO CONTROL THE CAMERA COAXIAL COMMUNICATIONS
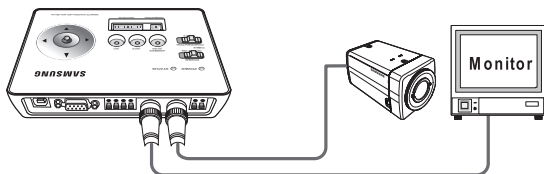
1. Connect the product to DC 12V power source or insert 4 AA-sized batteries into the battery compartment.

2. Set the protocol switch 7 to **ON**.

3. Connect the **VIDEO IN** of the unit and **VIDEO OUT** of the AI Camera directly.

   – For proper data communication, the unit and AI camera should be connected directly. (If you connect a DVR or keyboard in the middle of the main unit and AI camera, bidirectional communication will not be established.)

4. Connect **VIDEO OUT** of the main unit to a monitor's video input terminal.

5. Turn the Power switch **ON**.

   – When it is powered on for the first time, initialization begins and the status LED blinks once completed. During the initialization, no operation is enabled.

6. Now you can control the camera by using the menus.

❖ You can use the menu as following :

   – Press and hold [**ENTER**]: Moves to the main menu screen.

   – Press [**ENTER**] briefly: Used to confirm the current settings.

   – Four Direction Keys: Used to move the cursor up/down or left/right.

   – For proper coaxial communication, AI camera should be set to Samsung protocol. Refer to the switch settings. (See page 17)

   – Control of pan/tilt/zoom using the keys is not supported.

Connection & Control

TO CONTROL THE CAMERA USING RS-485 DEVICE VIA COAXIAL COMMUNICATIONS

1. Connect the product to DC 12V power source or insert 4 AA-sized batteries into the battery compartment.

2. Set the protocol switch 7 to **ON**.

3. Connect the **VIDEO IN** of the unit and **VIDEO OUT** of the AI Camera directly.
   – For proper data communication, the unit and AI camera should be connected directly. (If you connect a DVR or keyboard in the middle of the main unit and AI camera, bidirectional communication will not be established.)

4. Connect **VIDEO OUT** of the main unit to a monitor's video input terminal.

5. Connect **TX(+/-)** of RS-485 device to **RX(+/-)** of the main unit. (For a full duplex system, connect **RX(+/-)** of RS-485 device to **TX (+/-)** of main unit additionally.)

6. Using RS-485 device, you can control the camera menu.
   – For proper coaxial communication, AI camera should be set to Samsung protocol. Refer to the switch settings. (See page 17)
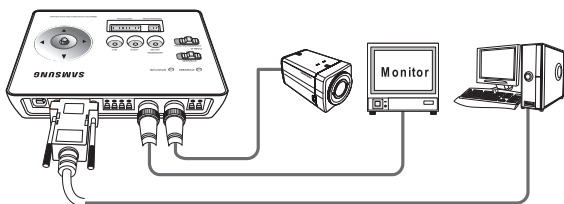
✎
NOTE
- By factory default, protocols of SAMSUNG and PANASONIC are supported.
- For additional protocols, update the following software program via the web.
- Input of video signal is required to control RS-485.

English **13**

Connection & Control

TO CONTROL THE CAMERA USING RS-232 DEVICE VIA COAXIAL COMMUNICATIONS

1. Connect the product to DC 12V power source or insert 4 AA-sized batteries into the battery compartment.

2. Set the protocol switches 7 and 8 to **ON**.

3. Connect the **VIDEO IN** of the unit and **VIDEO OUT** of the AI Camera directly.

   – For proper data communication, the unit and AI camera should be connected directly. (If you connect a DVR or keyboard in the middle of the main unit and AI camera, bidirectional communication will not be established.)

4. Connect **VIDEO OUT** of the main unit to a monitor's video input terminal.

5. Connect the RS-232 device's cable to the RS-232 port of the main unit.

6. Using RS-232 device, you can control the camera menu.

   – The RS-232 device is the same as RS-485 regarding the protocol setting, but supports only the Samsung protocol.

   – For proper coaxial communication, AI camera should be set to Samsung protocol. Refer to the switch settings. (See page 17)
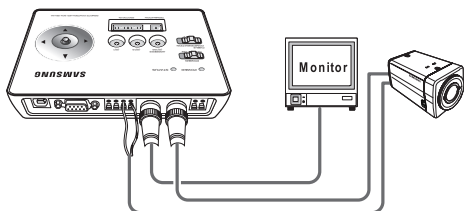
✎ ■ RS-232 and RS-485 communications cannot be used for simultaneous input.
NOTE

TO CONTROL THE CAMERA USING RS-485 SIGNAL OUTPUT

Monitor

1. Connect the product to DC 12V power source or insert 4 AA-sized batteries into the battery compartment.

2. Set the protocol switches 7 and 8 to **OFF**.

3. Connect the **RX(+/-)** of the unit to the **RS-485 (+/-)** port of the camera.

4. Match the camera's address, baud rate, and protocol to the same to those of the unit.

5. Now you can control the camera by using the menus.

❖ You can use the menu as following :

– Press and hold [**ENTER**]: Moves to the main menu screen.
                              To exit the menu screen, press and hold the key again.

– Press [**ENTER**] briefly: Used to confirm the current settings.

– Four Direction Keys: Used to move the cursor up/down or left/right.

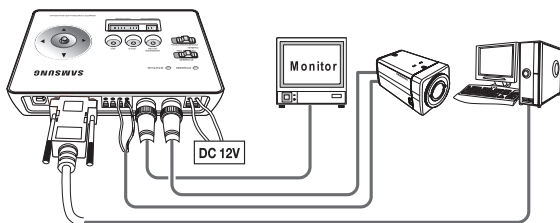– Control of pan/tilt/zoom using the buttons is not supported.

✎
NOTE
■ Input of video signal is required to control RS-485.
■ The next time you access the menu, press and hold the [ENTER] key twice.

Connection & Control

TO CONTROL THE CAMERA USING RS-485 SIGNAL OUTPUT VIA RS-232 COMMUNICATIONS

1. Connect the product to DC 12V power source or insert 4 AA-sized batteries into the battery compartment.

2. Set the protocol switch 8 to **ON**.

3. Connect the **RX(+/-)** of the unit to the **RS-485(+/-)** port of the camera.

4. Match the camera's address, baud rate, and protocol to the same to those of the unit.

   – RS-232 can be controlled using the Samsung protocol alone.

5. Connect the RS-232 device's cable to the RS-232 port of the main unit.

6. Using RS-232 device, you can control the camera menu.

◈ NOTE
- RS-232 and RS-485 communications cannot be used for simultaneous input.
- For the switch settings, see the switch setting table. (See page 17)
- Input of video signal is required to control RS-485.

SWITCH SETTING TABLE

❖ Use a combination of pin 1,2,3,4 of the Protocol setting switch to select a protocol.
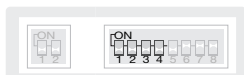
TERMINATION   PROTOCOL

HALF : half-duplex
FULL : full-duplex

Protocol Setting Switch (0 :↓, 1 :↑)				Protocol	HALF/FULL
Pin 1	Pin 2	Pin 3	Pin 4		
0	0	0	0	SAMSUNG	HALF
1	0	0	0	SAMSUNG	FULL
1	1	0	0	PANASONIC	HALF
0	0	1	0	PANASONIC	FULL
1	1	1	0	PHILIPS	HALF
1	0	0	1	KALATEL	HALF
0	1	0	1	ERNA	HALF
1	1	0	1	DIAMOND	HALF
0	0	1	1	VCL TP	HALF

NOTE
■ By default, it is configured to support SAMSUNG and PANASONIC.
For other protocols, you can find assistance from our website at:
http://www.samsungsecurity.com

❖ Use pin 7 and 8 of the Protocol setting switch to set the coaxial output.

	PIN 7	Output Selection
	ON	COAXIAL out
PROTOCOL	OFF	RS-485 out

	PIN 8	RS-232 input
	ON	RS-232 input
PROTOCOL	OFF	RS-232 No use

NOTE
■ RS-232 and RS-485 communications cannot be used for simultaneous input.

Connection & Control

– See the following table to set the baud rate.

TERMINATION   **PROTOCOL**

1. SAMSUNG

BAUD RATE	PIN 5	PIN 6
38400 BPS	OFF	OFF
19200 BPS	ON	OFF
9600 BPS	OFF	ON
4800 BPS	ON	ON

2. PHILIPS

BAUD RATE	PIN 5	PIN 6
38400 BPS	OFF	OFF
9600 BPS	ON	OFF

3. PANASONIC

BAUD RATE	PIN 5	PIN 6
19200 BPS	OFF	OFF
9600 BPS	ON	OFF
4800 BPS	OFF	ON

4. DIAMOND, VCL TP

BAUD RATE	PIN 5	PIN 6
9600 BPS	OFF	ON

✳ Only supports 9600 bps

5. ERNA

BAUD RATE	PIN 5	PIN 6
2400 BPS	ON	ON

✳ Only supports 2400 bps

6. KALATEL

BAUD RATE	PIN 5	PIN 6
9600 BPS	OFF	ON
4800 BPS	ON	ON

Specifications

SPECIFICATIONS

Item		Description
COAXIAL	Communication Method	COAXIAL INTERFACE
	Range	Max. 500m (with 5C-HFBT cable)
RS-232	Connector Type	D-SUB 9P
	Port	1 Port
	BAUD RATE	4800/9600/19200/38400bps (Only Samsung protocol supported)
RS-485	Connector Type	4P Terminal Type
	Port	1 Port
	BAUD RATE	2400/4800/9600/19200/38400bps (Supports each protocol)
USB PORT(USB2.0)		S/W PROGRAM UPLOAD
VIDEO IN/OUT		Composite Video 1.0Vp-p, 75ohm, Cable Compensation out (Select:S/L)
Environmental Conditions	Operating Temp.	-10℃ ~ +50℃
	Humidity	Less than 90%
POWER		DC12V ± 10%
DIMENSIONS (WxHxD)		150(W) X 36(H) X 102(D)
WEIGHT	NET	200 g

DIMENSIONS

Unit (mm)

ENG

SAMSUNG